The Korean Intellectual Property Office (KR) Publication of Application (A)

(51) Int.CI. H04B 1/38

(11) Publication No

10-2003-0053971

(43) Publication Date

2003-07-02

(21) Application No

10-2001-0084019

(22) Application Date

2001-12-24

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Examination Requested : Requested

(54) DEVICE AND METHOD FOR INPUTTING THE KOREAN ALPHABET USING KEYPAD OF TERMINAL

Abstract

Machine Translation

Human Translation

The present invention relates to the apparatus for inputting character and the method using a keypad, and the numeric key (0~9) of 10 and symbol '*' and '#' arranges the necessary fundamental consonant, the cardinal vowel and function key on a keypad in the respective written key in the hangul input. The consonant in which it has the aspirated consonant (\$\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\

► Representative Drawing(s)

Fig. 2

Descritption

Brief explanation of the drawing

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Fig. 1 is an illustrated configuration drawing the general in system configuration of the terminal which inputs a

character by using a keypad

- 3 Fig. 2 is a drawing showing the constitutional example of the Korean character keypad equipped on a keypad keypad of the apparatus for inputting character using the terminal of the present invention
- 4 Fig. 3 is a drawing showing the other constitutional example of the Korean character keypad equipped as to t keypad of the apparatus for inputting character using the terminal of an invention on a keypad.
- 5 <The description of reference numerals of the main elements in drawings>
- 6 10: keypad (Key Pad) 11: controller.
- 7 12: a font and character storage part 13: display.
- 8 21: consonant input key 22: collection input key.
- 9 23: function selection key.
 - Details of the Invention
 - Purpose of the Invention

The:Technical; Field; to, which; the; Invention; Belongs; and; the; Prior; Art; in; that; Filed;

- The present invention relates to the apparatus for inputting character and the method using the keypad (Key I the terminal, particularly, to the apparatus for inputting character and the method using the keypad which apparranges a consonant, a vowel and symbol and easy and which conveniently inputs all Korean character strickeypad including the domestic telephone or the mobile phone etc. to the minimum key input combination havi restricted keypad.
- 11 Generally, in the terminal like all kinds of the communications terminals or the personal portable or the small t a keypad is equipped as the user interface mean which makes accompany the predetermined function or in w user can input data.
- 12 Particularly, the different phoneme is therefore selectively inputted through one key that the number of keyparterminal such as the conventional mobile phone and general phone inputs Hangul to the terminal with the equivalent among the terminals are less than those of the number of consonant and vowel of Hanguls or several are assembled and one phoneme has to be inputted.
- Moreover, there can be the method, for inputting a consonant and vowel it makes use of the same key and m etc. assigns a vowel to 3 the key and comprises a vowel with the combination of this key as the method for in the Hangul letter by using the existing keypad. It is many it arranges a consonant and vowel to the same key input method of the Korean alphabet and it well is unable to reflect the characteristic of the Hangul inputting a the consonant next and it is inconvenient in the vowel input. Even in case of inputting the single vowel in case comprised of 3 vowels in one key, it requires the key stroke of the maximum 3 burn. Therefore, the convenier key input is excellent and relatively the key input typing speed writes and the keypad of the terminal in which is convenient is required.

TechnicalichallengesjofthejInvention

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Therefore, there can be the apparatus for inputting character easy and which conveniently inputs the Korean string and purpose a method is provided as the minimum key input combination the present invention approp

arranges a consonant, a vowel and sign etc. on the keypad of the instrument having the restricted keypad in a solve the above-described conventional problem, the present invention is worked out.

Structure & Operation of the Invention

- 15 To accomplish the above objects, the present invention is characterized that the arrangement of the formed k the vowel minor key of the consonant minor key of 5 and 6 and one function key is appropriately arranged on keypad of the terminal and it convenients, Hangul can be inputted to the minimum key stroke.
- That is, the present invention is characterized that the Korean character keypad is arranged in the keypad of terminal in which the Korean character keypad is formed. That is, the numeric key (0 key ~9 key) and two syr key (* key, and the # key) of 10 are formed in a keypad. The first consonant group (¬, ⊏, ㅂ, ㅅ, ㅊ), which is fundamental consonant of Hangul and the first vowel group (├, ┤, ⊥, ㅜ, 一, ㅣ) which is the basis single vo classified and the keypad is arranged among the key in the arbitrary key image part. A duplication the second group (├, ╡, ュュ, ㄲ) which is a dipthong is arranged in the corresponding to key related to the basis single vote first vowel group. And a duplication the second consonant group (ㄴ, ㅁ, ㄹ, ㅇ, శ) which is the consonar which the aspirated consonant and geminate consonant are not generated is arranged in the key of the first c group. And the function key for the selection of the aspirated consonant corresponding to the primary consonant geminate consonant are separately equipped in a consonant and vowel key the arbitrary key location.
- Moreover, in the order of 1 row 1 the heat of a keypad in order, the present invention each consonant of the fi consonant group (¬, ⊏, ㅂ, ⋌, ⋌) is arranged in the Korean character keypad keypad consisting of 4 row 3 1 row 2 the heat, 2 row 1 the heat, 2 row 2 the heat, 3 row 1 the heat, arranged. It is done by a feature to be redundantly arranged in the co-sited in which each consonant of the first consonant group is arranged and it I consonant of the second consonant group (ㄴ, ㅁ, ㄹ, ੦, శ). And each vowel of the primary vowel group (├¬¬, ¬, □) of the present invention is arranged as to the Korean character keypad keypad in order, consisting 3 the heat to 1 row 3 the heat, 2 row 3 the heat, 3 row 2 the heat, 3 row 3 the heat, 4 row 2 the heat, 4 row 3 the heat to 1 row 3 the heat, 2 row 3 the heat, 3 row 3 the heat, 4 row 2 the heat, 4 row 3 the heat to 1 row 3 the heat, 4 row 3 the heat, 4 row 3 the heat to 1 row 3 the heat, 4 row 3 the heat, 4 row 3 the heat to 1 row 3 the heat, 5 row 3 the heat, 6 row 3 the heat, 6 row 3 the heat, 7 row 3 the heat, 9 row
- As to the present invention, especially, the number in the collecting part, consonant, and vowel various symbol arranged.
- 22 Hereinafter, the attached present invention decides to be more circumstantially illustrated.
- 23 Fig. 1 is a drawing showing the character input system as to the communications terminal, a keypad is used.
- This system provides the storage unit (12), storing the controller (11) for the keypad (10), for the character incomment input processing and character display processing, the form of a character etc. the display (13) for character display etc.
- 25 Fig. 2 is a drawing showing the constitutional example of the Korean character keypad equipped as to the key the communications terminal on a keypad.
- 26 The keypad (10) of the communications terminal arranged the necessary consonant, a vowel and symbols in

- in which the numeric key (0~9) and symbol '*' of 10 were indicated and the key in which the symbol '#' was inthe hangul input. It comprised so that it be convenient that it arranged a consonant to the left key like the keyl computer and it arranged a vowel and a computer inputted Hangul to the right key pad to both hands.
- Moreover, the present invention arranges the consonant in which it has the aspirated consonant (本, 曰, 臣, 立 geminate consonant (ㄲ, ㄸ, ㅃ, ㅆ, ㅉ) to the primary consonant group and it easily can acquire the arrangen consonant. It inputs the aspirated consonant and geminate consonant by using the function key. A vowel sets basis single vowel group (ㅏ, ㅓ, ㅗ, ㅜ, ㅡ, ㅣ) and it adopts a dipthong or the mode inputting the threefold vot the combination of this single vowel.
- 29 In the meantime, as to the primary consonant group, because of being the first consonant group, the consonal is the consonant in which the aspirated consonant and geminate consonant are generated is done. Because the second consonant group 「つ, ⊏, ㅂ, ㅅ, ㅈ」, 「ㄴ, ㅁ, ㄹ, ㅇ, శ」 which is the consonant in which the consonant and geminate consonant are not generated is done.
- 30 Moreover, as to the primary vowel group, it says to be 「├, ┤, ㅗ, ㅜ, ㅡ, ㅣ」 which is the single vowel the vowel group lice. It says to be 「├, ┤, ɹ, 卅」 which is a dipthong the second vowel group lice.
- That is, as to the consonant input key (21) of the present invention, the primary consonant group is arranged keypad (10) and the arrangement of the first consonant soldier 「¬, □, ㅂ, 冷」 is successively arranged in the heat of the Korean character keypad for the convenience of an input to 2 row 2 the heat in a left the right. the consonant group is arranged in 3 row 1 the heat. The second consonant group (ㄴ, ㅁ, ㄹ, ㅇ, శ) which is consonant which does not come under the consonant, which does not come under a next, and the primary cc group that is, the aspirated consonant (an aspirate) and geminate consonant (A hardening) is redundantly arr the same location as the first consonant group. Therefore, the consonant input key (21) of the present inventiformed among the keypad (10) overall structure through a left. At this time, as to the consonant group arrange does not arrange to the key which is the same with the consonant which can comprise the complex consoner organizing with the complex consonent (ʊn, ʊx etc).
- 33 As described above, as to a consonant on the keypad (10) and vowel and symbol is the Hangul keyboard arrastructure of the respective assigned present invention, if it explains the method for inputting Hangul, the method follows:
- Firstly, it selects the corresponding key with 1 time and the first consonant group and the first vowel group car

among the primary consonant group and vowel group. An input is possible since the second consonant group second vowel group select the corresponding key with 2 time.

- 135 「勻, ㅌ, ఐ, ᄎ」 After selecting the fundamental consonant corresponding to the primary consonant group, i the function key (23) with 1 time and it inputs. After selecting the fundamental consonant corresponding to, it the function key with 2 times and the input of the geminate consonant like 「ㄲ, ㄸ, ㅃ, ㅆ, ㅉ」 inputs.
- For example, after selecting the key in which the number '1' of the keypad (10) is written when inputting the aconsonant '=' since the fundamental consonant about '=' is '=', the function key is selected with 1 time and input. As to the input of '=', after inputting the key in which the number '1' of a keypad is written since being '2 times ***, the fundamental consonant about '=' can input '=' the function key. That is, if the function key is with 1 time after selecting '=', '=' is and if it more inputs with 1 time, '=' is inputted. However, if the times input arrival sequence of the geminate consonant and aspirated consonant, that is, the function key continuously ir function key while changing and implementing, it again gets changed into the aspirated consonant with the as consonant, and the geminate consonant.
- 37 The input of a dipthong or 3 double vowel can input to the combination of the single vowel.
- If the key in which the key in '3' of ' \cdot ' of the primary vowel group is written is inputted in case of the input of a dipthong, for example, ' \cdot ' \cdot ' \cdot ' can be and if the key in which thereafter the key in '#' of ' \cdot ' is writt pressed, ' \cdot ' can be inputted.
- After when inputting the threefold vowel, for example, '놰', firstly 'ㅗ' being inputted and inputting 'ㅏ', 'ㅣ' is inputted is, if the key of '#' is inputted firstly after the key in which '8' is written being inputted and inputting the key '3' is written, the input of '놰' is made.
- 40 Fig. 3 is a drawing showing the other constitutional example of the Korean character keypad equipped as to t keypad of the communications terminal on a keypad.
- In the present preferred embodiment, a symbol, for exemple, a symbol, for exemple, (, .,), -, a /, and a @: by including __ etc. being assigned to the key of the collecting part (22 of fig. 2) and using the function key, it inpassigns a symbol to the collecting part, then this avoid the aspirated consonant, and the geminate consonant duplication. For example, if the function key is inputted after inputting the key '0' when inputting the symbol '-' (subtraction sign), the symbol '-' is inputted.
- In the meantime, as to the Korean alphabet keyboard layout on the keypad of the present invention, it arrange regardless of the number of a keypad and the arrangement of the vowel group and all consonants can implem Moreover, the first consonant group and the second consonant group change front and back placement sequ it can implement. And it changes with the other consonant group and it forms the consonant group and it can with the same consonant group in other words.

> Effects of the Invention

As illustrated in the above, the apparatus for inputting character using a keypad can comprise so that it be ve convenient that the arrangement of the Korean alphabet arranges a consonant to the left side of the key like t computer keyboard and it arranges a vowel to the right side and the Korean alphabet keyboard layout structu on a keypad inputs Hangul with both hands. And in addition even when inputting the aspirated consonant and geminate consonant, it arranges the aspirated consonant and the geminate consonant related to the primary consonant group and it minimizes the Sookgi effort about the key arrangement it appropriately arranges a syr about the hangul input and it can be easy and it conveniently input all Korean character strings with the minim matching.

Scope of Claims

Claim[1]:

The apparatus for inputting character that uses a keypad, wherein the second vowel group (; 引, 中, 中) wh numeric keies (0 key ~9 key) and two symbolic key (* key, and the # key) are formed on the keypad of the ap the first consonant group (¬, ⊏, ㅂ, ㅅ, ㅈ), which is the fundamental consonant of Hangul and the first vowe (; , 十, 中, 一, 1) which is the basis single vowel are classified and the keypad is arranged among the ke arbitrary key; and is a dipthong a duplication is opposed to the corresponding to key related to the basis single of the first vowel group; a duplication the second consonant group (, 中, 中, 中, 中) which is the consonant in the aspirated consonant and geminate consonant are not generated is arranged in the key of the first consonant group; and the function key for the selection of the aspirated consonant corresponding to the primary consonant geminate consonant are separately equipped in a consonant and vowel key the arbitrary key location.

Claim[2]:

Claim[3]:

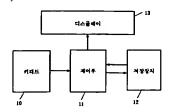
The apparatus for inputting character using a keypad of claim 1, wherein it is not arranged in the key which is same in the arrangement of the second consonant group with the consonant comprising the complex consonant

Claim[4]:

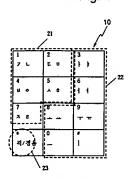
The apparatus for inputting character using a keypad of claim 1 or 2, wherein in order, each consonant of the consonant group (¬, ⊏, ㅂ, ㅅ, ㅈ) is arranged in the Korean character keypad keypad consisting of 4 row 3 it is arranged as the net of 1 row 1 the heat, 1 row 2 the heat, 2 row 1 the heat, 2 row 2 the heat, 3 row 1 the l keypad; and each consonant of the second consonant group (ㄴ, ㅁ, ㄹ, ㅇ, శ) is redundantly arranged in the in which each consonant of the first consonant group is arranged.

Claim[5]:









• Fig. 2

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• Fig. 3